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PROCUREMENT RESEARCH– KEY TO QUALITY TECHNOLOGY

Better "Mousetraps" for Fewer Dollars

HOW DoD'S PROCUREMENT RESEARCH INSURES TOP QUALITY TECHNOLOGY

By
ARTHUR I. MENDOLIA
Asst. Secretary of Defense
(Installations & Logistics)

There is something less than complete agreement as to just what constitutes Procurement Research. Some feel that research must be long range, plowing new ground, and preferably a bit esoteric to be worthy of the name. They look on short-range studies or problem-solving as essentially staff studies. Others feel that any problem solving, however short-range, is a Procurement Research task.

A quick look at the list of research projects that are either underway or have been completed in the past would bear this out. Piecost is an example of along-range project, and if it lives up to expectations, will be a real boon in pricing for many years hence. The Air Force Project Petroleum, Oil, Lubricant (POL) was relatively short, but with a more immediate pay-off. It involved the development of computer programs to determine the optimal awards for POL in situations involving numerous bidders, quantities, and destinations.

The Army Procurement Research Office at Ft. Lee, Virginia, has performed a number of should-cost studies. Studies are being done in design-to-cost, another on the influence of independent government cost estimates on pricing, on the control of constructive changes, and several others.

The Air Force has recently completed a study in procurement productivity indices, and another on the variables that enter into computation of economic order quantities.

I could go on with this list, but I think this indicates the range and breadth of things which are being researched.

I find this subject and its potential benefits intriguing enough that I did a little research of my own to find out just how we got to where we are today. I found that the Department of Defense's (DoD) active interest and efforts in Procurement Research date back almost seven years, to something called the Hershey Procurement Pricing Conference, held in the fall of 1967.

The Army in 1970 was the first to establish a formal Procurement Research Office. The Procurement Research Coordinating Committee was set up in the fall of 1971 at the Office of the Secretary of Defense (OSD) level, to guide, coordinate, act as a channel of communications and in general promote Procurement Research by the Departments. The Air Force held the first symposium early in 1972, and the interest and activity in Procurement Research has grown steadily since that time.

We still have a lot to do, both in organization and substantive research, but I feel we are headed in the right direction. We are pushing the bow wave for something that promises to become more important government-wide in the years ahead. The Commission on Government Procurement recommended a continuing

The original illustrative material depicting fictional "prototype pest disposal units" was especially prepared for this issue of COMMANDERS DIGEST by staff artist Bill Chadbourne.

program of Federal Procurement Research. One of the tasks levied, by statute, on the newly created Office of Federal Procurement Policy (OFPP) is to organize and conduct a program of Procurement Research. Our experience up to this point will be very useful not only to ourselves, but to the entire Federal procurement community. It will be to our mutual advantage to cooperate with the OFPP in this regard.

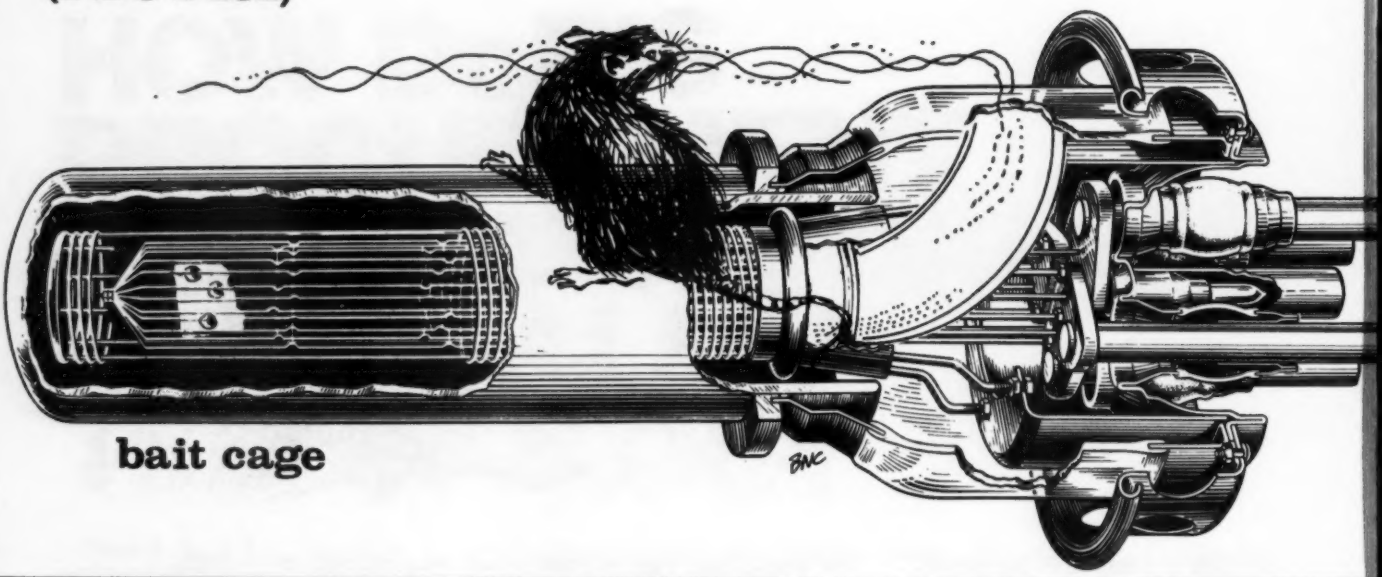
For my part, I am very much interested in what is being done and what will be done in Procurement Research. And not just because Procurement Research has been made a function of the Office of Federal Procurement Policy. DoD has moved out and demonstrated the value of such research and I'm sure will continue to set the pace for this research on a government-wide scale. Even without an OFPP, we would want to continue and expand our efforts to improve the procurement process and develop new techniques.

Just two weeks ago, I sent out to the other Assistant Secretaries of Defense and to the Installations and Logistics secretaries of the Military Departments an instruction setting up procedures for the management of logistics studies. These procedures cover all logistics studies performed for or under the sponsorship of the Office of the Assistant Secretary of Defense (Installations and Logistics) OASD(I&L). Briefly, what we have done is set up a study planning and review board to be chaired by my principal deputy. This board is responsible for screening all requests for logistics studies originating in OASD(I&L). It will determine those which should be performed, establish priorities, monitor progress, determine the extent to which the studies meet the original objectives, and monitor implementation of study recommendations. At the same time, it will, of course, coordinate with other DoD logistics study efforts such as the Logistics System Policy Committee (LSPC).

I mention this management effort on our part for two reasons. First, I think it indicates clearly that we at the Office of the Secretary of Defense (OSD) level have a great interest in ensuring that we get the most out of the limited resources available to us. We want to avoid unnecessary duplication, avoid reinventing the wheel, and ensure that studies which are undertaken produce meaningful results and don't just gather dust on someone's shelf.

Secondly, I think that some of the procedures we have established for the management of logistics studies might also be applicable to your efforts. I recognize that this is not an OSD-level effort, and that the Military Departments have first

PROTOTYPE
Pest Disposal Unit
(PDU-P101)



claim to the resources devoted to Procurement Research. However, I would urge the procurement managers in the Military Departments to manage those resources so as to achieve optimum output for DoD as a whole. This means keeping the communication channels open, both between research activities from one department to another, and up the chain within each department to your representatives on the Procurement Research Coordinating Committee.

Only in this way can the committee effectively perform its coordinating function. And just being aware of and continually up-to-date as to what is going on in each of the departments is only a beginning. The departments must be willing to trade off, eliminate unnecessary duplication, establish priorities—in short, ensure that the scarce talent is not wasted. I would not want to see any worthwhile project stifled by being "overmanaged", or by a management procedure that is not keyed in to what Procurement Research is all about. I don't see the need for any new or changed organization. I think that what you have now in the departments, with a coordinating committee, chaired at OSD level, is working and can continue to work. I would only urge you to keep that communication line open—let each other know what your problems and needs are, what you are working on, and the results you achieve.

That brings us to the question of how should we be utilizing the available resources to get the most out of Procurement Research? I don't think there is any single or best answer to that question. We have plenty of known problems to be working on—everyday "firefighting". We can't all be looking into ways to build a better mousetrap and ignore the fact that we are in trouble if we're being overrun by mice. Someone has to fight those mice with today's traps, while we look for new techniques and designs that may make them obsolete tomorrow. We also have to look ahead, to try to picture what procurement may look like 5, 10, or 20 years from now, and so some long-range research to be prepared for that era. So, while we're putting out today's fires, let's also devote some of our time and thinking to tomorrow's techniques.

I mentioned earlier that I didn't find complete agreement as to what

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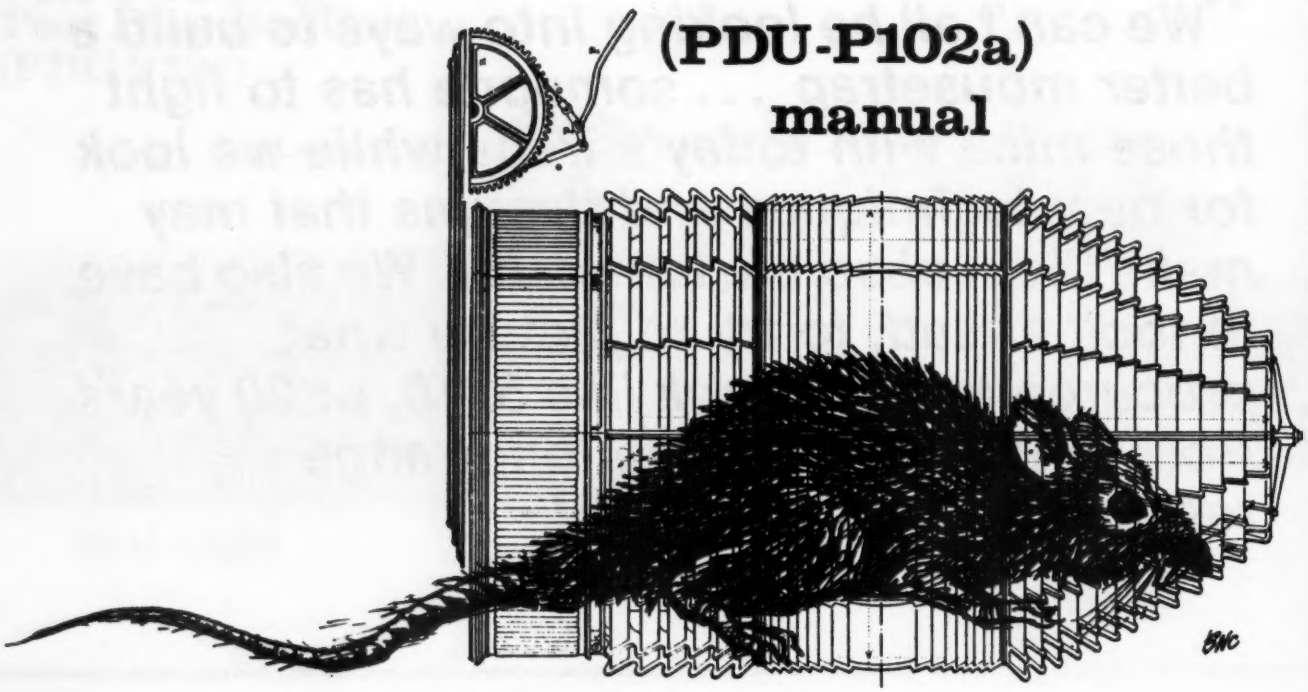
should be called Procurement Research. I did, however, find agreement on the definition of research. "Research is a systematic approach which aims to define and to solve problems already known, or to explore areas projected into the unknown where problems have not become sufficiently crystallized to be defined." The key is a systematic approach to solving problems, whether they be known or unknown.

Not every project undertaken will be carried through to completion, nor will all those which are completed produce the kind of results we might like to see. We must judge our research efforts, not just in terms of "successes", but in terms of "tries" as well.

So much for procedure. Some of the procurement operators may be asking themselves why we need to have this thing called Procurement Research at all. Unless you have already been the beneficiary of some particular project, you may think of it as an underutilization of scarce procurement talent. Let me assure you that this is not so. Worthwhile Procurement Research requires not only knowledge of procurement but many other skills—particularly a researcher's inquisitiveness and an ability to comprehend the many interacting factors that bear on any given problem. In addition, successful research cannot be accomplished very often in the hustle and bustle of carrying on a normal procurement operation. The researcher needs to be able to take an objective look at the situation and give it the time it deserves. Finally, the researcher has laboratory tools at his disposal, such as computers, where he can test out various solutions. These are just some of the factors which favor a separate Procurement Research effort. I would urge the procurement operators to take advantage of the research capabilities at your disposal. Don't let your problems eat away at your effectiveness like a cancer. Take them to the people who have the time and resources to do something about them.

But we can't stop there. It is important to keep the momentum going long after. The policy makers and practitioners, educators and operators must continue the dialogue that has just begun. One of the most important things to be accomplished is to bring different parts of the procurement world together and lay the groundwork for



better communication in solving procurement problems. Just as the doctor cannot practice without patients, neither can the procurement researcher do an effective job without some input from his "clients"—the operators. Research in a vacuum may produce some innovations but these will likely be accidental under such circumstances. Likewise, research operators could be struggling along for years with some nagging problems which you just could never take the time to resolve. I would urge you to take advantage of every opportunity to capitalize on each other's problems. We also have the talent to solve those problems. So let's keep the communications lines open.

Finally, let's identify some of the procurement problems that need researching. Many people think that since the Armed Services Procurement Regulations (ASPR) has been undergoing change constantly over the past 25 years, our procurement policies and techniques are always up to date. I don't think this is the case. The technology of virtually every other aspect of the Defense Department has undergone intensive research and has been updated as a result. Yet procurement has not undergone any significant changes since World War II, in terms of the basic statute, or the methods and procedures which stem from that statute.

Similarly, little organized effort is devoted to anticipating problems, and, through systematic research, devising meaningful answers that can be applied so as to effect lasting improvements. Most of the new procedures, which have entered the ASPR system since 1948, have been reactionary procedures resulting directly from adverse criticism or from the need to solve an existing problem.

Procurement Research can and does help solve some of these

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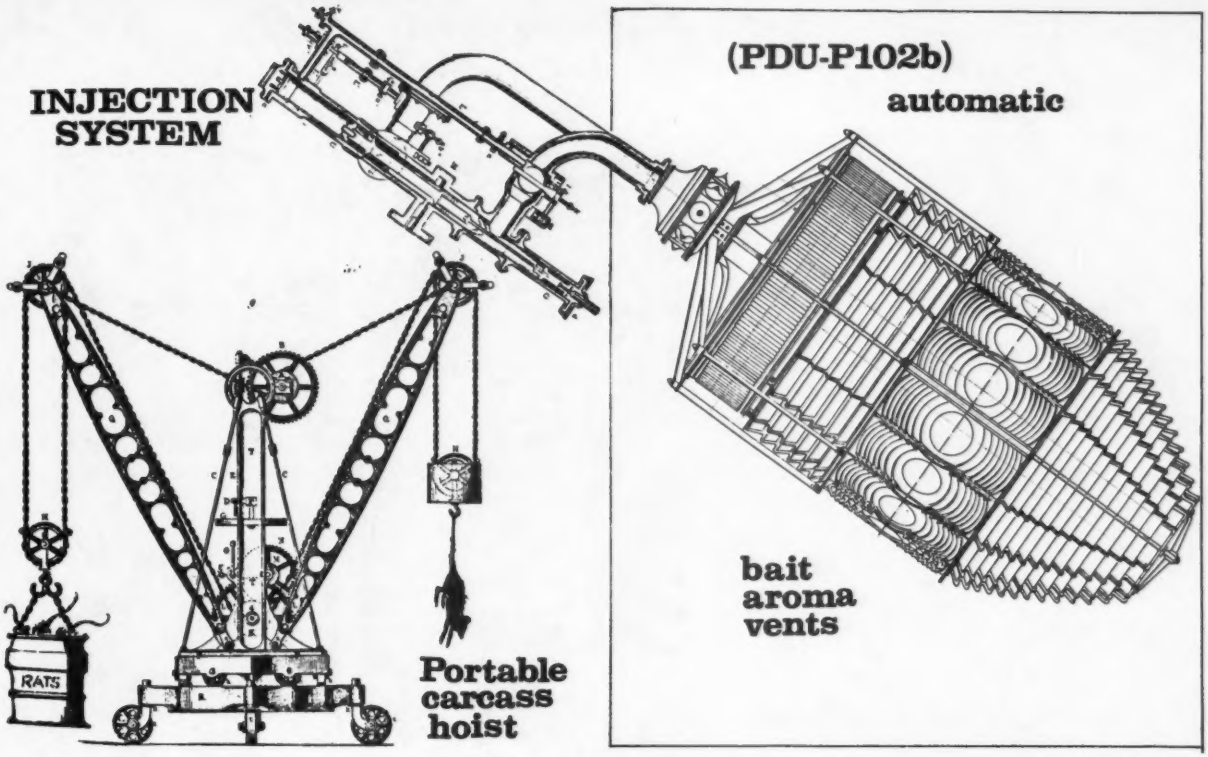
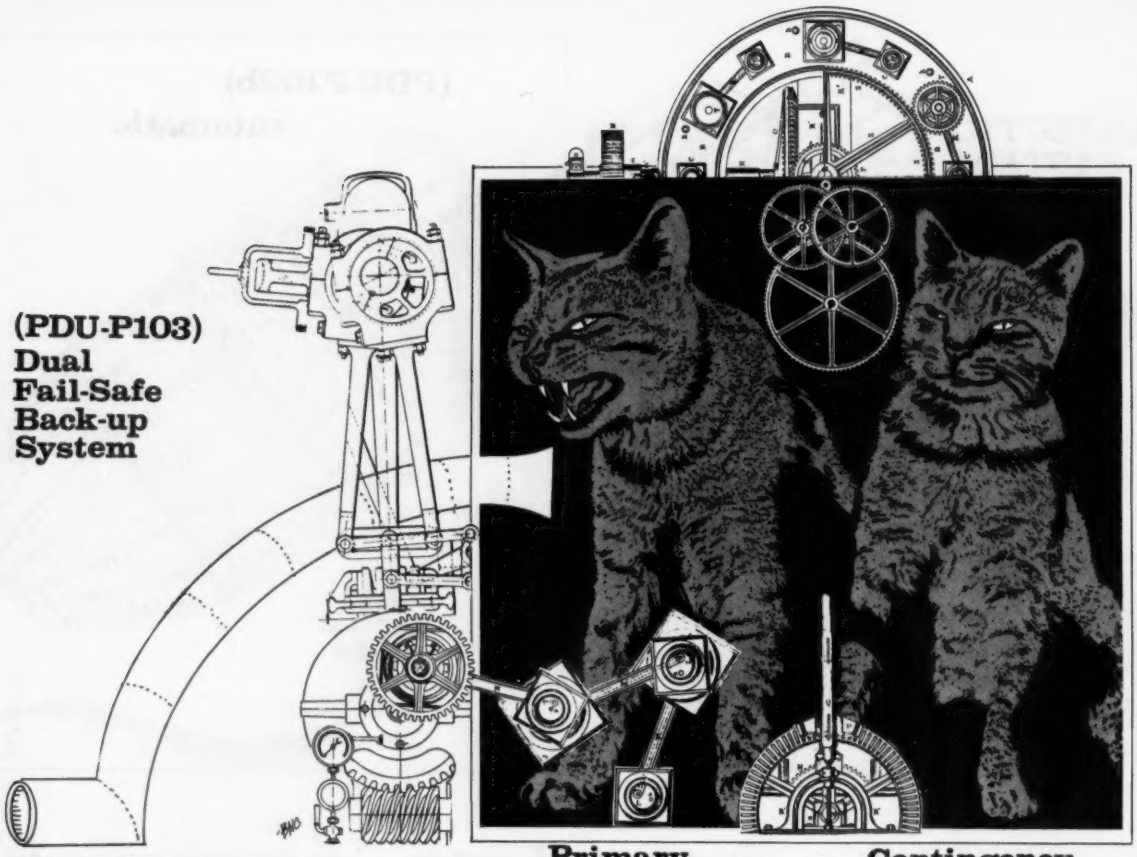


existing problems. But this is short-term—firefighting, if you will. Who is stepping back and looking at what our procurement system will look like 10 or 20 years down the road? Procurements are going to get more complex and fraught with problems just as the systems we buy get more complex. The continuing complaints about complicated specifications, Request For Proposals (RFPs) about poor pricing capabilities, and the increasing attention given to claims are very real evidence of the direction we are heading. I don't know what the answer is, but I submit it may lie in Procurement Research. Perhaps the time has come for a quantum jump—to leapfrog the whole inventory of problems that bog down systems procurement today—to take the bold step of devising something completely new and different. Every time we advance the state of the art technically, yesterday's equipment becomes obsolete, and the pricing experience becomes obsolete right along with it. We are continually gathering data banks on costs, but they are for yesterday's equipment. What we need is some way to forecast realistically what tomorrow's costs will be. That is only one of the many challenges I see for Procurement Research.

I am quite surprised that we don't seem to have the tools in hand or real motivation to reduce the costs of Defense material. In industry, we constantly spend today's money to reduce the cost of tomorrow's production. We don't do enough of that in DoD, and I believe we should. We need a breakthrough in this area—some good research and good thinking, if you will. I have asked my staff to delve into this for me. We need to inquire into how our contractors generate cash and how they use it. We then need to compare this experience with practices in the commercial field. Such a comparison might lead us to reexamine some of the more basic premises that have governed our business relationships for decades. Surely we would be willing to consider seriously greatly increased profits or the recognition, as a cost, of the cost of capital if we can be assured that the unit cost of production would be reduced significantly.

There are many, many more questions we ask ourselves everyday that are inviting subjects for Procurement Research—that lend themselves to the scientific approach of hypothesis data gathering, data testing and solution. Take the use of automation. As our



larger procurements become more and more complex, we have less time to devote to the millions of small actions that could bog us down. How can we expand the use of automation without degradation of good pricing. Does automation result in increased prices, either administrative costs or actual costs of hardware? Can automated techniques in bid solicitation, evaluation, contract preparation and award be successfully interfaced with automation in other phases of the logistics function, such as inventory management?

The use of automation is closely related to productivity. You have done some work in productivity indices, but much more needs to be done if we are to give adequate consideration to quality in this matter—or if we are to demonstrate that productivity simply cannot be validly measured in our complex procurements.

On the subject of pricing, we have been trying new techniques for years in attempting to ensure that our contract prices are fair and reasonable to both parties. We have tried data banks of costs, engineering estimates, parametric cost estimating, should-cost, design- to-cost, life cycle costing and so on. And yet, pricing continues to be one of our chief problems, particularly in today's inflationary environment. How do we achieve reasonable and fair prices, either in the short range or long range, in today's volatile economy? Another problem is the control and pricing of changes. How can we ensure that changes are fairly priced and do not afford a contractor the opportunity to "get well" at the expense of the government, or that they do not become bogged down in claims?

I could go on and on with the enumeration of challenging problems. But I will only mention one more. We hear a great deal about the cost of maintenance, about life cycle costing, failure-free warranties, zero defects, and so forth. How can these disciplines, these goals, be successfully married early in the game to other disciplines such as design-to-cost? Getting good hardware at reasonable prices requires the optimum consideration of all these disciplines I have mentioned. We are not looking for the absolute lowest unit production cost, particularly if it means high maintenance, short life, or extended periods out of service.

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